

## REMARKS

### I. Summary

This amendment and response is in reply to the Office Action mailed February 2, 2010 ("Office Action"). Claims 1-4 and 6-20 were rejected. Claims 1 and 2 are amended. Claim 21 is new. Claims 4, 6, and 19 are canceled. No new matter is presented.

### II. Interview Summary

Assignee thanks Examiner Smith for the interview extended on May 10, 2010. Participants in the interview included Examiner Smith, Alexander Franco, and Ryan Gleitz. During the interview, the arguments below were generally discussed. No claim amendments were presented. No amendments were presented and no agreement was reached.

### III. Rejections Under 35 U.S.C. § 103

#### A. Independent claims 1 and 12

Claims 1-4, 6-9, 11-16, and 18 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Lemmons (U.S. Pat. App. Pub. No. 2003/0028873) in view of Bulman (U.S. 6,351,265). In making the rejection, the Office Action also relies on Markel (U.S. Pat. App. No. 60/354,745), which Lemmons incorporates by reference. Assignee respectfully traverses these rejections.

#### 1. Claim 1:

Claim 1 recites, *inter alia*, receiving orientation and position data for the moving object, the orientation and position data captured by a sensor attached to the moving object; receiving position data for a camera that captured each current image; and determining in each current image a location, an orientation and a size of said predetermined area of said moving object, wherein the orientation is determined using the orientation and position data for the moving object and the position data for the camera.

The subject matter of claim 19 (now cancelled) included "receiving sensor data associated with the orientation of the moving object." The Office Action acknowledges that Lemmons in view of Bulman does not specifically disclose receiving sensor data

associated with the orientation of the moving object. See Office Action, p. 9. The Office Action then relies on Kumar.

However, Kumar also does not fill in the gaps left by Lemmons in view of Bulman. Kumar describes a system for reusing a production set without actually recreating the physical set by image the set and combining it with other images. See abstract. Kumar teaches tracking cameras using position and orientation sensors. See col. 3, line 66 – col. 4, line 10. The camera position is determined using two steps. First, camera parameters are measured to crudely estimate the camera position. Second, indicia images, which may be blue X's printed on the walls of the production set, are used to refine the camera position. See col. 7, lines 20-23, 54-65.

Kumar does not teach or suggest receiving orientation and position data for a moving object, the orientation and position data captured by a sensor attached to the moving object or determining in each current image a location, an orientation and a size of said predetermined area of said moving object, wherein the orientation is determined using the orientation and position data for the moving object and the position data for the camera.

Therefore, none of Lemmons, Bulman, Kumar, or combinations thereof teach or suggest all of the features of claim 1. Accordingly, Assignee respectfully requests that the rejections of claim 1 and dependent claims 2-4, 6-11, and 14-18 be withdrawn.

2. Claim 12:

Claim 12 is directed to a system for generating a stream of video images to be broadcasted such that, at the reception, in each current image, a preregistered picture is superimposed on a predetermined area of a moving object. Claim 12 recites a calculator for providing a set of oriented views of said picture for various orientations and associating with each oriented view an orientation index that identifies the physical orientation of the oriented view of the preregistered picture associated with the corresponding orientation index; and a selector for selecting, among said set of oriented views, an oriented picture having the same orientation as said predetermined area in the current image, and selecting the associated orientation index.

Lemmons describes a system in which labels are superimposed post-production into a video stream. See Abstract. The labels may include advertising material. See Fig. 2,

4A-5B. A central computer contains data files of the labels. "There may be one data file for each advertiser, or one data file for each advertisement (label) and may comprise a label 712 that exists as graphical information within the data file." See ¶ 57.

Lemmons states that a moving location tag may be superimposed into the video stream and incorporates Markel by reference for this purpose. Markel describes "hot spots" that are placed on top of a video signal. The user may click on the hot spot to launch some interactive content. See p. 5.

As acknowledged by the Office Action, Lemmons incorporated with Markel does not teach or suggest selecting the associated orientation index. See Office Action, p. 3.

The Office Action asserts that Bulman fills in the gaps left by Lemmons and Markel. Assignee respectfully disagrees. Bulman describes a system for superimposing scaled heads on images of bodies, as shown in Figs. 6 and 7. A series of heads may be processed and scaled to different sizes. See col. 3, lines 16-19. In one example, Bulman states: "These images differ in orientation and position, in a manner which is recorded in conjunction with the image. Therefore, a desired positioning and orientation for a cohesive match with the background image may be obtained by selecting the closest image actually obtained." Col. 13, lines 31-35. However, the mere recording of orientation and position does not imply or require an index. The cited portions of Bulman, for example col. 13, lines 33-37, merely disclose matching images of a human head subject to a background image. No index is identified or transmitted as required by claim 12.

During the interview, the Examiner stated that the names F1, F2, etc., as shown by Fig. 11 may be considered an index because the names are associated with the various faces and appear to be an ordered list. Applicants respectfully disagree for two reasons.

First, Fig. 11 including names F1, F2, etc. is part of Example 5. See col. 10, line 64 – col. 12, line 12. Example 5 does not involve different orientations. Instead, Example 5 involves a scanned photograph, see col. 11, lines 2-5, which is "automatically scaled up to 30 different sizes, from small to large, each of which is saved as an individual foreground image with a distinct name (F1, F2, F3, etc.) to produce a file called 'Faces.'" See col. 11, lines 22-26. The only discussion possibly related to recording orientation in conjunction with the image is in the Examples of 6 and 7, which are "[i]n contrast to the system

described above [Example 5]." See col. 12, lines 13-15. Therefore, the Examiner's position from the interview improperly combines two embodiments that should not be combined.

Second, if the embodiments were combined, there is no reason that the names F1, F2, etc. rise to the level of an orientation index. The names are only names. The names are not an orientation index that identifies the physical orientation of the oriented view of the preregistered picture associated with the corresponding orientation index, as required by claim 12.

Therefore, none of Lemmons, Markel, Bulman, and combinations thereof teaches or suggests associating with each oriented view an orientation index that identifies the physical orientation of the oriented view of the preregistered picture associated with the corresponding orientation index; and a selector for selecting, among said set of oriented views, an oriented picture having the same orientation as said predetermined area in the current image, and selecting the associated orientation index.

Accordingly, claim 12 is also patentable over Lemmons and Bulman. Therefore, Assignee respectfully requests that the rejections of claim 12 and dependent claim 13 be withdrawn.

B. Independent claim 20

Claim 20 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Lemmons and Markel in view of Bulman, and further in view of Patent Application Publication No. 2003/0023981 ("Lemmons '981").

Claim 20 is directed to a method for transmitting a stream of video images such that a preregistered picture can be superimposed on a predetermined area of a moving object depicted in the stream. Claim 20 recites providing, with a calculator, a first set of oriented views of the preregistered picture in various orientations ... and for each video image of the stream of video images: determining location, orientation and size of the predetermined area of the moving object in the video image; selecting, from the orientation indices associated with the first set of oriented views, an orientation index corresponding to an orientation of the predetermined area of the moving object in the video image; and transmitting the video image along with the selected orientation index, the determined location and the size of the predetermined area of the moving object in the video image.

Accordingly, for at least the same reasons as claim 12, claim 20 is also patentable over Lemmons, Markel, and Bulman. Lemmons '981 does not fill in the gaps discussed above.

In addition, claim 20 recites in advance of transmission of the stream of video images, transmitting each oriented view of the first set of oriented views in association with an orientation index that identifies a physical orientation of the oriented view of the preregistered picture.

The Office Action acknowledges that neither Lemmons/Markel nor Bulman describes transmitting each oriented view of the first set of oriented views in advance of transmission of the stream of video images. See p. 12. Lemmons '981 also fails to describe this feature.

Lemmons '981 describes a system where a television program is transmitted on one channel and enhancements to the television program are transmitted on another channel. See abstract. The enhancements may include management messages or program guides. See ¶18. The receiver may store combined data in a hard drive. See ¶ 29. Lemmons '981 is completely silent regarding transmitting oriented views in advance of transmission of the stream of video images.

Accordingly, claim 20 is patentable over Lemmons, Markel, Bulman, and Lemmon '981. For at least these reasons, Assignee respectfully requests that the rejections of claim 20 be withdrawn.

#### C. Other Prior Art References

Claim 10 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Lemmons and Markel in view of Bulman, and further in view of Wixson (U.S. Pat. No. 6,434,254). However, claim 10 is patentable for at least the same reasons as claim 1 because Wixson does not make up for the deficiencies of Lemmons. Accordingly, Assignee respectfully requests withdrawal of the rejection of claim 10 under 35 U.S.C. § 103(a).

Claim 17 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Lemmons and Markel in view of Bulman, and further in view of Martinolich (U.S. Pat. App. Pub. No. 2003/0023971). However, claim 17 is patentable for at least the same reasons as claim 1 because Martinolich does not make up for the deficiencies of Lemmons.

Accordingly, Assignee respectfully requests withdrawal of the rejection of claim 17 under 35 U.S.C. § 103(a).

D. New claim 21


Claim 21 recites transmitting a polygon representation of an obstruction with the video image and the selected orientation index. None of the cited prior art teaches or suggests transmitting a polygon representation of an obstruction with a video image and an orientation index. Accordingly, Applicants submit that, in addition to the reasons above, claim 21 is allowable over the cited prior art.

**IV. Conclusion**

Therefore, in view of the above remarks, Assignee respectfully submits that this application is in condition for allowance and such action is earnestly requested.

If for any reason the Examiner is not able to allow the application, he is requested to contact the Assignee's undersigned attorney at (312) 321-4200.

Respectfully submitted,



Ryan Gleitz  
Registration No. 62,164  
Attorney for Assignee

BRINKS HOFER GILSON & LIONE  
P.O. BOX 10395  
CHICAGO, ILLINOIS 60610  
(312) 321-4200